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92-04341/

NATIONAL SURVEY OF HOUSING CONDITIONS: Planning Report

NATIONAL SURVEY OF HOUSING CONDITIONS

Planning Report

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Statistics Canada
May 1991

RESUMÉ

Title: Feasibility Study for a National Survey of Housing Conditions

Contractor: Statistics Canada

CIDN: 0536 0200001 CR# 7060-1

Statistics Canada were asked to consider several options for delivering the survey instruments which were developed by EKOS Research in a companion study. The methods were: as a 1991 Post-Censal Survey; as part of the HIFE set of surveys and as a standalone survey. The survey would cover the condition of the dwelling as perceived by the occupant- owners and renters as well as a landlord component for rented accommodation. Statistics Canada recommended that the survey be conducted in conjunction with HIFE which already collects many of the same housing data items. The survey would be conducted mainly by a telephone interview of 20 minutes in length, in August/September, some five months after the other components. The HIFE sample would consist of 29,900 owners & 13,700 renters, of whom 22,425 and 10,275 respectively could be expected (given the lapse of time) to participate in this survey. The landlord response rate is estimated at 50%.

Also a physical inspection by trained inspectors would be undertaken of a sub-sample of the dwellings as a means of verifying and calibrating the reliability of the occupants' assessment against a more objective standard. Statistics Canada feel that 10,000 inspections would be needed. These would be done by staff hired and trained by CMHC and none of the inspections related costs are included in the cost estimate.

The estimated cost for the survey (excluding the inspections) in $1991/92 is $1,864,000. This includes field, printing, training, data capture and related costs up to and including the production of a clean micro data file.

FICHE D'INFORMATION

Titre : Feasibility Study for a National Survey of Housing Conditions
(étude de faisabilité d'une enquête nationale sur les conditions de logement)

Entrepreneur : Statistique Canada

CIDN : 0536 0200001 Dossier n° 7060-1

On a demandé à Statistique Canada d'étudier plusieurs manières de mettre en oeuvre les moyens d'enquête mis au point par EKOS Research dans une étude complémentaire. Les possibilités étaient les suivantes : en faire une enquête postcensitaire de 1991; les joindre aux enquêtes qui composent l'ERMEM; en faire une enquête autonome. Cette enquête porterait sur l'état des logements d'après l'opinion de leurs occupants (qu'ils soient propriétaires ou locataires) et comprendrait aussi des questions pour les propriétaires-bailleurs de logements locatifs. Statistique Canada recommande qu'elle soit menée conjointement avec l'ERMEM, qui recueille déjà un bon nombre des données désirées. L'enquête se ferait principalement par entrevues téléphoniques de 20 minutes en août-septembre, quelque cinq mois après les autres composantes de l'ERMEM. L'échantillon de l'ERMEM comprendrait 29 900 propriétaires et 13 700 locataires, dont 22 425 et 10 275, respectivement, devraient pouvoir participer (vu l'intervalle) à l'enquête sur les conditions de logement. On estime à 50 p. 100 le taux de réponse des propriétaires-bailleurs.

De plus, pour vérifier la fiabilité de l'évaluation faite par les occupants et l'étalonner en la comparant à des données plus objectives, des inspecteurs spécialement formés feraient l'inspection d'un sous-échantillon de logements. Statistique Canada estime que 10 000 inspections seraient nécessaires. Celles-ci seraient exécutées par des personnes engagées et formées par la SCHL; aucune des dépenses liées à ces inspections n'est comprise dans l'estimation du coût.

Le coût estimatif de l'enquête (les inspections exclues) est de 1 864 000 $ en dollars de 1991-92. Cette somme comprend l'exécution proprement dite de l'enquête, l'impression des documents, la formation du personnel, la saisie des données et les frais connexes jusqu'à, et y compris, la production d'un fichier de microdonnées validées.

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0. Introduction

Since the release of the feasibility study on the National Survey of Housing Conditions, in July 1990, further discussions have led to a more definite plan of action to conduct the survey. The purpose of this planning report is to describe the proposed survey design and collection strategy.

In this report, the following topics will be discussed:

- survey design,
- sample design based on the HIFE surveys,
- survey questionnaires and data contents,
- survey operations,
- microdata release policy and
- survey cost estimates.

Since funding for this project will not likely be available for 1991, this report is not intended to be complete and thorough. It does, however, provide additional details and information than was provided in the feasibility study. This information would hopefully be the starting point should this project resurface at some time in the future.

1. Survey Design

The National Survey of Housing Conditions has four components. The first component consists of a homeowners' survey. Its purpose is to collect housing and environment data from households who actually own their dwelling. The nature of the information would be both factual, in terms of the actual physical condition of the dwelling, as well as subjective, in the appreciation of the housing and living conditions of the dwelling and its environment.

The second and third components are directed to the households living in rented accomodations. Since households living in rented accomodations do not own their dwellings, their ability to provide the full details on their dwelling's condition is obviously limited. The information they are able to provide is collected in the second component, a renters' survey. A third component, which consists of a follow-up of the tenants' landlords, complements this information. In situations where the landlord may not be the best source of information, the management of maintenance contractor, or even a superintendent, would be surveyed for the third component. The net effect of these two components is to yield the same level of details from rented dwellings as for owner occupied dwellings in the first component, although additional information specific to renters is collected in the second component. The landlords' survey provides additional income and expense data for the buildings where the sampled rental units are located.

The fourth and final component consists of a physical inspection for a sub-sample of dwellings, both owner occupied and rented. Its purpose is to provide an objective and factual assessment of a dwelling's condition and its surrounding environment.

2. Sample Design

It is planned to conduct the National Survey of Housing Conditions using the HIFE sample. Hife consists of a database whose data come from a number of surveys which will be conducted as supplements to the Labour Force Survey (LFS) in the spring of 1991. The following surveys make up the HIFE database:

- LFS,
- Rent Survey,
- Housing Repair And Renovation Survey,
- Income Questionnaire,
- Household Facilities & Equipment Survey and
- Shelter Cost Survey.

The HIFE database provides a wealth of information on households and their dwellings. Much of that information is directly related to the housing conditions, the remainder being valuable, in varying degrees, to its analysis.

In 1991, the HIFE surveys are conducted on a common sample of approximately 43,000 households across the ten Canadian provinces. Table 1 gives the provincial distribution of this sample by homeowners and renters. These figures pertain to the 1991 HIFE surveys. They would need to be revised should the National Survey of Housing Conditions be conducted using a later HIFE sample since its size is subject to change.

NATIONAL SURVEY OF HOUSING CONDITIONS
Table 1: Sample Sizes (Households)

Province	Homeowners	Renters	Total
Newfoundland	2,900	700	3,600
Prince Edward Island	1,400	400	1,800
Nova Scotia	2,000	700	2,700
New Brunswick	1,800	600	2,400
Québec	4,500	2,800	7,300
Ontario	7,400	3,400	10,800
Manitoba	2,600	1,600	4,200
Saskatchewan	2,400	1,200	3,600
Alberta	2,500	1,200	3,700
British Columbia	2,400	1,100	3,500
Canada	29,900	13,700	43,600

The homeowners' survey would be conducted on some 29,900 households across Canada. The renters' survey would be conducted on a sample of approximately 13,700 households. The landlords' survey would be conducted on that same sample of 13,700 households. The physical inspection survey would be conducted on a sub-sample of 10,000 households selected from the total of 43,600 households.

Data reliability issues were addressed in the feasibility study. There is nothing new to report on the subject. The methodological section of the feasibility study, which discusses data reliability issues, has been included as appendix A in this report for the sake of completeness. An imputation technique is used in the HIFE surveys to deal with non-response. The objective is to have complete data for all responding households in the LFS. This technique avoids the need to reweight for each survey and insures consistency in all tabulations. The same approach would be used for the National Survey of Housing Conditions. Consequently, data reliability measures would need to be based on the effective sample size rather than on the fully imputed data file.

3. Survey Questionnaires

Draft questions have been provided by *Ekos Research Associates Inc* for all four survey components. At first examination, many questions that appear in the *Ekos* draft are already present in the HIFE surveys. Although some of these repeated questions would need to be asked again to maintain coherence in the interviews, a good number of them need not be repeated. Table 2 illustrates the number of items contained in the *Ekos* draft for each of the four survey components. A distinction is made between an item and a question; a question requiring possibly more than one entry from a respondent, each entry representing an item.

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Table 2: Questionnaire Items

Survey Component	*Ekos* Items	Repeated Items	Remaining Items	Capture Keystrokes
Homeowners' Survey	115	41	64	81
Renters' Survey	108	48	60	74
Landlords' Survey	103	31	72	312
Physical Inspection	101	4	97	230

The "*Ekos* Items" column provides an approximate count of survey items included in the *Ekos* draft. The "Repeated Items" column gives an approximate count of the survey items already included in one of the HIFE surveys and which would not likely need to be asked again. The "Remaining Items" column provides an approximate count of survey items left to be collected in each of the four components. The number of remaining items is well below the limit of 120 items which can be collected in a 30 minute interview. It is very likely, therefore, that the length of interview for the first two components would be closer to 20 minutes. As for the third component, the landlords' survey, given the level of financial details to be collected, the interview length is still likely to be 30 minutes, if not more. For the purposes of this planning report, the number of remaining items in the physical inspection component is not critical since no costing was done for their collection.

The "Capture Keystrokes" column provides some insight into the data capture costs for each of the four survey components. It is obvious from the numbers in this column that the third and fourth components represent an important component in the data capture. In fact, approximately 60% of data capture costs would be dedicated to those two components.

The data contents of the landlords' component presents some concern when considering

weighting. The weighting methodology that is considered for this project assigns weights for each sampled dwelling so as to represent the population of dwellings in the target population. In fact, these weights will have already been calculated and assigned to the dwellings in the HIFE database. A good number of data items in the landlords' survey, i.e. costs and financing, are related to the buildings where the rented dwelling units in the sample are located. The proposed weighting methodology may not yield appropriate statistics for such data items which are applicable to the whole building rather than each individual dwelling unit. This will become an even greater problem with the presence in the sample of multiple units from a same building. These data items will likely require their own weighting methodology so as to represent the population of rental buildings in the target population. This will require computing selection probabilities for rental buildings since rental units are originally selected in the sample and not rental buildings.

4. Survey Operations

This section provides a description of the survey operations involved in collecting the data for the first three survey components. Data from the physical inspection component would not be collected by Statistics Canada interviewers, but rather by inspectors recruited by CMHC. Since these data are to be collected under the Statistics Act, it will have some impact on the actual hiring of the inspectors. This point will be addressed in paragraph 4.4.

LFS interviewers will be used to administer the interviews in the first three components. Interviewer training will consist of a 4-hour home study program. It will include the reading of the interviewer's manual and the completion of review exercises. Senior interviewers will ensure that survey concepts and definitions are adequately understood by the interviewers.

Interviews will be done over the telephone as much as possible. Only telephone interviews will be permitted in the landlords' survey. It is expected that virtually no manual coding will be required on the completed survey questionnaires. Data will be captured in the Statistics Canada regional offices, including the physical inspection survey. Data will then be edited and imputed, where necessary, in preparation for tabulation. Statistics Canada is currently in the process of implementing computer assisted interviewing operations with interactive capture and editing of survey data. The National Survey of Housing Conditions would most likely take full advantage of these streamlined and cost-effective operations. As a consequence, data capture and pre-editing costs will need to be revised once the cost benefit of this new technology is known.

4.1 Homeowners' Survey

An estimated 29,900 households who own their dwelling would be included in the homeowners' survey (see table 1). Approximately 80% of all interviews would be done over the telephone. Personal interviews will be necessary in some instances for the following reasons:

a) dwellings without telephone service,
b) households who refused to consent to a telephone interview and
c) dwellings whose households have moved and will require tracing.

As was stated earlier, the length of interview for the homeowners' survey is expected to be approximately 20 minutes. This will need to be verified in a pre-test. A response rate of 75% is expected. The HIFE surveys have traditionally had an 86% response rate. Given that this survey was planned to be conducted in late August/September 1991, some 5 months after the first HIFE survey and when all respondents would have rotated out of the Labour Force Survey, we would forcast a further drop in response rate. The net result would be an expected 22,425 completed questionnaires in this component. Data for all non-responding households would be imputed from households with similar characteristics.

4.2 Renters' Survey

An estimated 13,700 households living in rented accomodations would be included in the renters' survey (see table 1). As in the homeowners' survey, approximately 80% of all interviews would be done over the phone; the remainder being done in person. As well, the length of interview is also expected to be 20 minutes and the response rate 75%. We would therefore expect some 10,275 completed questionnaires in this component. Again, imputation would provide data for the non-responding households in this component.

As part of the Renters' survey, landlord information is needed to subsequently conduct the landlords' survey, namely name, address and telephone number of the landlord. These data items were not included in the *Ekos* draft and will ultimately add to the length of interview.

4.3 Landlords' Survey

Since landlord information is collected only from responding households in the renters' survey, an estimated 10,275 households living in rented accomodations would be included in the landlords' survey. Additional activities will be needed to avoid duplication of collection when dealing with sampled rental units in the same building as well as for landlords who own more than one rental building with rental units in the sample.

In the landlords' survey, all interviews would be done over the telephone. No personal interviews would be permitted because of the expense involved. The length of the interview will not exceed 30 minutes. A pre-test would be needed to determine the length of interview. The presence of quite detailed financial information in the landlords' questionnaire is of some concern.

A response rate of 50% is expected. Based on the Québec experience in this area cited in the feasibility study, and by making extensive use of tracing procedures, we would expect to achieve this response rate. A pre-test would determine our ability to achieve this goal. We can therefore expect 5,150 completed questionnaires in the landlords' survey.

4.4 Physical Inspection

Physical inspections are to be carried out by inspectors recruited by CMHC. In order to assure the confidentiality of the data collected, these inspectors would have to be hired by Statistics Canada and sworn in under the Statistics Act. The following hiring process has been proposed. Statistics Canada interviewers are usually hired through its referral system. Candidates with the appropriate credentials to be inspectors will be hired in this manner. Should there not be enough suitable candidates from the referral system, we would then be free to hire candidates referred by CMHC. All of these inspectors would then be sworn in as Statistics Canada employees under the Statistics Act and paid by Statistics Canada. CMHC would provide the funds for their salaries and fees. At this time, there would not appear to be any problem in dropping the usual overhead fees on these expenses that Statistics Canada charges its external clients. All of these points will

need to be re-examined in the future to determine if they are still acceptable in a possibly changing environment.

A total of 10,000 physical inspections are planned. Since conducting the physical inspection would require the consent of the dwellings' owners, the 10,000 inspected dwellings would be selected from a pool of roughly 32,700 responding households (i.e. 22,425 + 10,275). Some degree of coordination will be required between the interviewers who will be contacting the households to schedule appointments for the physical inspections and communicating the information to the inspectors in a timely fashion. This obviously assumes that the dwellings to be inspected would be known in advance at the time of interview. This should not be a problem.

Data collection costs for this component are not included in this planning report. Data capture and processing costs have been included based on a total of 10,000 completed inspection reports.

5. Microdata Release Policy

The matter of releasing a detailed microdata file from the National Survey of Housing Conditions linked to the HIFE database has led to extensive discussions. Statistics Canada's position on this matter was presented to CMHC in a letter dated November 15, 1990. It basically states that Statistics Canada would not likely release such a microdata file with the level of detail requested by CMHC. The increased risk of disclosing confidential information would be too great. As well, Statistics Canada would not likely allow the release of a detailed Housing Conditions microdata file because of the possible linkage to the HIFE microdata file. The linked HIFE / Housing Conditions microdata file that Statistics Canada would release would be useful in making summary descriptive analyses of housing conditions but would likely fall short of providing an adequate database for thorough investigative analyses that CMHC and the other survey sponsors would ultimately expect to do.

The detailed microdata file that CMHC would require could only remain internal to Statistics Canada. It would be accessible to anyone with proper authorisation and sworn in under the Statistics Act. CMHC could therefore assign consultants to Statistics Canada and who would then be sworn in under the Statistics Act. They would then be able to produce statistical tables in accordance with specifications spelled out by CMHC, or any other survey sponsor. It is hoped that an arrangement acceptable to CMHC and its partners can be made within this framework.

6. Survey Cost Estimates

The total cost of conducting the National Survey of Housing Conditions using the 1991 HIFE sample is estimated at $1,864,000. This cost is broken down in table 3. The data collection costs for the physical inspection component are **not** included. This cost estimate assumes that the bulk of the work would have been done in the 1991/92 fiscal year. This estimate will obviously need to be revised if this is not the case.

NATIONAL SURVEY OF HOUSING CONDITIONS
Table 3: Revised Cost Estimates

	Estimate
Pre-test Costs	$50,000
Data Collection Costs	$1,216,000
Design, Processing and Management Costs	
Printing	$63,000
Data Capture Programs	$39,000
Data Capture	$77,000
Management	$70,000
Methodology Support	$60,000
Informatics Support	$55,000
Main Computer Costs	$124,000
Data Processing	$90,000
Other	$20,000
TOTAL SURVEY COSTS	$1,864,000

This cost estimate also reflects the traditional data collection and data collection operations at Statistics Canada. The cost estimate should be revised in light of the forthcoming implementation of the computer-assisted data collection and capture technology in Statistics Canada's Regional Offices.

The estimated data collection costs have increased by some $500,000 from the estimate given in the feasibility study. Although refinements made to the estimate based on the additional information contained in this report have increased the original estimate, the following factors also lead to significant increases to the original cost estimate:

1) Given the nature of the questions asked in all components, additional training

has been considered a necessity.

2) Sample increases of roughly 3,000 households have been approved for the HIFE surveys.

3) Given the amount of detailed financial information that would be asked from landlords, the length of interview for the landlords' component has been extended to 30 minutes from the original estimate of 15 minutes.

4) Personal interviews for the homeowners' and renters' components had not been included in the feasibility study's estimate.

5) Additional Regional Office staff would be required to properly coordinate the landlords' component based on the responses to the renters' component in regards to tracing requirements and avoiding duplication for landlords with many units in the sample.

7. Conclusion

The National Survey of Housing Conditions is best conducted as part of the HIFE surveys. This approach yields a rich database of information on housing conditions and related characteristics. However, access to such a database is not as straight-forward as CMHC would like. Nonetheless, adequate access can be provided so as not to hinder the thorough analyses that the survey sponsors require.

Data collection operations will need to be coordinated between the survey's four components when dealing with the follow-up of the landlords and scheduling the physical inspections. The matter of hiring inspectors has been addressed in this planning report and a proposal put forward which should meet fully CMHC's requirements.